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THREE NEW SPECIES OF *MEROMACRUS* (DIPTERA, SYRPHIDAE)

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The strictly American genus *Meromacrus* Rondani is confined to the tropics, with the exception of one species occurring in the southeastern United States. Up to the present time sixteen species have been definitely assigned to the genus. It is possible that some other described forms belong here but this cannot be determined from the descriptions. The members of the genus are moderately large, brightly colored flies, most readily distinguished from *Eristalis* Latreille by the presence of yellowish tomentose markings on the thorax.

The types of the new species are in The American Museum of Natural History. The following key includes only those species that are represented in the Museum collection.

TABLE OF SPECIES

1.—Abdomen with pale tomentose spots or fasciae beyond the first segment.....2.
Abdomen without pale tomentose markings beyond the first segment.....12.

2.—With a large, equilateral yellow tomentose triangle immediately in front of the scutellum.....*millesoides* Bigot.
Prescutellar tomentose markings transverse, not forming a large triangle.....3.

3.—No pale markings immediately in front of the scutellum.....*bruneri*, n. sp.
A band of pale hair or tomentum in front of the scutellum.....4.

4.—Costal border of the wing with very broad, sharply defined yellowish or brown border.....6.
Costal border of the wing broadly darkened but never greatly contrasting with the remainder of the wing; mesonotal suture never with yellow tomentum on inner half.....5.

5.—Mesonotum with four distinct cinereous vittae, the median pair closely approximate; second and third abdominal segments mostly tawny, and yellow pilose. *potens* Curran.
Mesonotum almost unicolorous except for the yellow tomentose spots; second and third segments mostly black pilose, the third with broad, yellow tomentose basal fascia.....*cinctus* Drury.

6.—An oblique, curved yellow stripe extends from the notopleura to the anterior margin of the mesonotum inside the humeri.....*simplex* Schiner.
No continuous stripe from the notopleura to the inner ends of the humeri.....7.

7.—Pale fasciae on the third and fourth abdominal segments broadly interrupted in the middle.....8.

Pale fasciae entire or only obscurely interrupted.....*zonatus* Loew.
8.—Third antennal segment decidedly longer than wide.....9.
Third antennal segment wider than long.....*ruficrus* Wiedemann.
9.—Tomentose markings on the mesonotal sutures entire.....10.
Tomentose markings on the mesonotal sutures divided to form two spots on either side.....*decorus* Loew.
10.—Posterior femora black-haired above on the apical third.....11.
Posterior femora wholly reddish yellow pilose except for part of the stout setulae below on the apical third.....*flukei*, n. sp.
11.—Wings yellowish in front on the basal half.....*acutus* Fabricius.
Wings brown in front, the costal cell paler.....*pratorum* Fabricius.[1]
12.—Wings deep black on the whole length, the costal cell not distinctly paler; first abdominal segment without conspicuous yellow tomentum.....*niger* Sack.
Wings with at least the costal cell luteous or subhyaline; first abdominal segment with a pair of contiguous, rectangular yellow tomentose spots, or yellow pilose. 13.
13.—Wings yellowish anteriorly on the basal half.....*fucatus* Hull.
Wings with only the costal cell luteous.....*anna*, n. sp.

Meromacrus bruneri, new species

Thorax opaque black, with a pair of yellow tomentose triangles in front; abdomen shining black. Length, 16 mm.

FEMALE.—Head black in ground color, the sides of the face broadly and the narrow posterior orbits whitish pollinose. Front dull black, black-haired, the sides narrowly brownish yellow pollinose on more than the lower half. Hair of the posterior orbits white except above and below. Cheeks and face shining black, the face with thin white hair on the pollinose portion; face in profile perpendicular below, rather deeply concave on the upper half, the antennal prominence shining. Antennae black, the third segment transverse.

Thorax opaque black, clothed with short black hair except for a pair of subtriangular yellow tomentose spots in front. Scutellum shining brown, with a trace of cinereous pollen.

Legs blackish, black-haired; posterior tibiae with a median tubercular swelling on the under surface.

Wings with brown tinge, broadly brown in front. Squamae brown, with reddish brown fringe. Halteres brown.

Abdomen shining bluish black, black-haired; second segment with a broad median fascia of brownish hair; third segment with a very narrow basal fascia of yellowish hair and lateral tufts of pale yellow pile. Sternites with long black hair.

HOLOTYPE.—Female, La Salle School Collection, E. E. A. Cuba, No. 10393, received from Dr. Bruner through Dr. C. L. Fluke.

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[1] This is the same species which I described as *panamensis* and its range extends into Brazil. In his original description Fabricius states that the posterior femora are ' unidentate," a character not found in any species of *Meromacrus* but suggestive of *Spilomyia* or a related genus. In other respects the description agrees with this form and also with Wiedemann's interpretation of the species. The West Indian forms recorded by Williston and myself as *pratorum* represent a distinct species which is herein described under the name *flukei*.

Meromacrus flukei, new species

Related to *decorus* Loew but at once distinguished by having the sutural tomentose stripe entire and not broken into a notopleural and sutural spot, much paler facial pile and the abdominal spots narrowed laterally. Length, 10 to 13 mm.

MALE.—Front brownish red, the sides white pollinose and thickly whitish pilose; vertical triangle black, pale pollinose and pilose in front of the ocelli; vertex black; occiput whitish pollinose and very pale yellow tomentose, the pile of the vertex yellow. Cheeks and middle of face brownish yellow, the sides of the face broadly whitish pollinose and densely pale yellowish or almost whitish pilose. Face slightly retreating, very gently concave above. Antennae brownish yellow; third segment oval, one-half longer than wide; arista yellow.

Thorax reddish brown, the mesonotum dull black except on the broad sides, the pleura with a broad black band across the middle, this latter mostly covered by pale yellow tomentum. Mesonotum with a pair of yellow tomentose, triangular spots in front and with the suture broadly (broadly interrupted in the middle) yellow tomentose, the usual prescutellar band of tomentum also present. Scutellum reddish brown or brownish red, with very short black hair, the margin with some long pale hairs except in the middle.

Legs bright orange, the hair wholly yellow except for some black setulae on the ventral surface of the femora; coxae white pollinose.

Wings hyaline, brownish yellow in front, more brown on the apical third. Squamae with brown border and yellowish fringe. Halteres reddish.

Abdomen reddish with the upper surface mostly dull black, sometimes black, with yellow tomentose markings on a reddish or yellowish ground. First segment with a pair of large, moderately separated pale yellow tomentose spots, their outer ends contiguous with a patch of longer white tomentum or pile on the sides of the second segment in front; second segment with a broadly interrupted median shining fascia, the outer ends broadened and reaching the base of the segment and extending narrowly to the posterior border. Third and fourth segments each with a broadly interrupted basal band of yellow tomentum, the spots formed widest near their inner ends and distinctly narrowed laterally. Hair coarse, sparse and black dorsally, fine, abundant and pale yellow on the sides, long and whitish on the venter. Genitalia brownish yellow, with rather golden or brownish yellow appressed hair.

FEMALE.—Sides of the front broadly yellow tomentose or densely pilose to the level of the anterior ocellus, the pale pile usually replacing the black median pile for some distance in front of the ocelli but the brown median vitta is distinct; facial pile yellow but still much paler than in *decorus*. One female has the abdomen considerably reddish while the other has it black; apical segments dull reddish brown, with black hair; hair of venter shorter and pale yellowish.

TYPES.—Holotype, male, and allotype, female, St. Vincent, West Indies (Williston Collection). Paratype, female, St. Thomas, Virgin Islands, November 22, 1925 (F. E. Lutz).

This species has been recorded by Williston from St. Vincent as *pratorum* Fabricius and by myself as the same species from St. Thomas. I have seen *pratorum* from several localities in South America and, follow-

ing Williston in considering *flukei* to be *pratorum*, redescribed it as *panamensis* from the Canal Zone.

It gives me great pleasure to name this fine species for Dr. C. L. Fluke, who has donated to the Museum so many new and interesting species of Syrphidae.

Meromacrus anna, new species

Related to *niger* Sack but at once distinguished by the striking tomentose markings on the first abdominal segment, the almost hyaline or pale luteous costal cell and the very dense yellow pile on the under side of the femora. Length, 8 to 14 mm.

MALE.—Antennal prominence reddish; frontal triangle black with the sides broadly yellowish in ground color, clothed with cinereous pollen and brassy yellow pile. Vertical triangle black, black-haired and brown pollinose, the anterior angle and the vertex with cinereous pollen; vertex and occiput with yellowish pile, the posterior orbits thickly bright yellow tomentose. Cheeks black in front, reddish beneath the eyes. Face black with the sides broadly reddish in ground color, and cinereous pollinose, the red color extending broadly to the oral margin; pile brassy yellow. Antennae reddish; third segment brown, roughly oval, one-third longer than wide.

Thorax black, the mesonotum dull; mesonotum with a slender gray pollinose vitta on the middle of the anterior three-fifths, the inner half of the suture yellowish gray pollinose but the marking not conspicuous; a slightly curved line of yellow tomentum extends along the inner edge of the humeri and to the base of the wings; the prescutellar tomentose band is widest in the middle but not at all triangular; hair short and black. Scutellum brownish yellow with the base blackish; hair short and black, some yellow hairs on the lower edge except apically. Pleura with thin white pile, the sternum with long yellow pile.

Legs black; knees, tips of the posterior four tibiae and their tarsi wholly reddish. Femora strongly swollen, the anterior four yellow pilose, the pile long and dense beneath, on the apical third of the ventral surface black and becoming short toward the apex; posterior femora with long black hair beneath, the upper surface with erect yellow hair on the basal half and with long pale hair on the whole basal sixth. Anterior tibiae black-haired, the posteroventral surface with some yellow pile on the apical half; middle and posterior tibiae with short yellow pile, somewhat silvery pollinose anteriorly, the pile long on the apical half of the posterior surface of the middle pair; tarsi wholly black-haired; coxae with yellow pile that is dense on the posterior four.

Wings hyaline, the anterior third brown, the costal cell cinereous or pale luteous. Squamae dark brown, the upper lobe with cinereous, the lower with white fringe. Halteres yellow.

Abdomen black, the apical segment sometimes brownish. First segment yellow tomentose on more than the median half; sides of the abdomen with whitish pile, the dorsum black-haired; tip of the third segment with a fringe of very short yellow hairs, the fourth mostly with brownish yellow or yellowish hair toward the sides and apex but variable in this respect. Venter with long whitish hair. Genitalia with thin cinereous pollen and very short white hair.

FEMALE.—Front brownish red pollinose on the lower half and on the sides above, the lower orbits yellow pollinose and pilose, the hair otherwise black; above the middle with a large opaque black spot on either side, the ocellar tubercle rather dull. Legs less swollen and with only short hair. Fourth and fifth abdominal segments with yellowish hair, the fifth with brownish gray pollen.

TYPES.—Holotype, male, and allotype, female, Fort Randolph, Canal Zone, January 23, 1929. Paratypes: male and female, Fort Randolph, January 23, 1929; two males, France Field, Canal Zone, January 18, 1929; female, Fort Sherman, Canal Zone, February 5, 1929; and male, Barro Colorado Island, Canal Zone, January 8, 1929 (Curran).

This species differs from the description of *fucatus* Hull by the long pile on the legs, the incomplete median mesonotal vitta and the color of the wings.

I have before me specimens of *M. niger* Sack from São Paulo, Brazil (Barbiellini), British Guiana (Beebe), and Peru. It has the wings deep black on more than the anterior third and lacks long pile on the femora in the male.